Center for Exoplanet Science Colloquium Series

Date: *Thursday, 4 September 2008*

Time: *4:00 pm (Coffee & Cookies @ 3:45)*

Place: *JPL Building 169-336*

Speaker: *Marc Postman, STScI*

Title: *From Exoplanets to Super-Massive Black Holes: The Science Case for A Large UV/Optical Space Telescope*

Abstract: I will gaze into my crystal ball and attempt to identify the astrophysics discovery space that can be uniquely accessed with a filled, large-aperture (8 - 20m) UV/optical space telescope with an angular resolution up to 10 times better than JWST and sensitivity up to 2000 times that of HST. In particular, I will focus on four research areas that are amongst the prime drivers for such an advanced astronomical facility: 1) the detection of habitability and bio-signatures on terrestrial mass exoplanets, 2) the reconstruction of the detailed history of the assembly of stellar mass in the local universe, 3) establishing the mass function and characterizing the accretion environments of supermassive black holes out to redshifts of z ~ 7, and 4) the precise determination of growth of structure in the universe by kinematic mapping of the dark matter halos of galaxies as functions of time and environment.